

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace, without prejudice, all prior versions, and listings, of claims in the application.

LISTING OF THE CLAIMS:

1. (Currently Amended) A method for controlling the execution of a computer program, having multitasking capability, on a computing element of a controller for at least one of controlling and regulating a system that can take up various possible system states, comprising:

subdividing the computer program into a plurality of functionally linked functionalities;

defining possible operating states for the functionalities;

defining possible system states of the system;

allocating specifiable operating states to the functionalities for each system state;

ascertaining dependencies of the functionalities on one another, a first functionality being dependent upon a second functionality if at least one input variable of the first functionality is ascertained in the second functionality; and

centrally specifying the operating states required for a certain system state, taking into consideration the ascertained dependencies among the functionalities and further boundary conditions,

wherein each of the operating states is defined by an operating state variable which is able to take up various operating state values, and

wherein each of the operating state variables is able to take up operating state values corresponding to “full functionality”, “limited functionality” and “no functionality” settings.

2. (Currently Amended) The method as recited in claim 4 [[1]], wherein each of the operating states is defined by an operating state variable which is able to take up various operating state values.

3. (Original) The method as recited in claim 2, wherein each of the operating state variables is able to take up operating state values corresponding to “full functionality”, “limited functionality” and “no functionality” settings.

4. (Currently Amended) ~~The method as recited in claim 1,~~ A method for controlling the execution of a computer program, having multitasking capability, on a computing element of a controller for at least one of controlling and regulating a system that can take up various possible system states, comprising:

subdividing the computer program into a plurality of functionally linked functionalities;

defining possible operating states for the functionalities;

defining possible system states of the system;

allocating specifiable operating states to the functionalities for each system state;

ascertaining dependencies of the functionalities on one another, a first functionality being dependent upon a second functionality if at least one input variable of the first functionality is ascertained in the second functionality; and

centrally specifying the operating states required for a certain system state, taking into consideration the ascertained dependencies among the functionalities and further boundary conditions,

wherein for taking into consideration the ascertained dependencies among the functionalities, staggering in time a processing of the functionalities which characterize the certain system state in such a way that the second functionality is processed before the first functionality, so as to ascertain the at least one input variable of the first functionality.

5. (Original) The method as recited in claim 1, wherein for taking into consideration the ascertained dependencies among the functionalities, the at least one input variable for the first functionality is ascertained in a way other than by processing the second functionality.

6. (Original) The method as recited in claim 5, further comprising:

ascertaining the at least one input variable for the first functionality by at least one of modeling the input variable from other variables, ascertaining a substitute variable, or ascertaining the input variable with using an alternative algorithm.

7. (Original) The method as recited in claim 1, wherein the operating states are specified by the functionalities which characterize a certain system state, as a function of at least one fault appearing in the system.

8. (Original) The method as recited in claim 1, wherein the operating states are specified by the functionalities, which characterize a certain system state, as a function of actual operating states of the functionalities.

9. (Original) The method as recited in claim 1, further comprising:
at least one of controlling and regulating a system in a vehicle using the computer program.

10. (Original) The method as recited in claim 9, wherein the vehicle is a motor vehicle.

11. (Original) The method as recited in claim 1, further comprising:
at least one controlling and regulating a driving dynamics system in a motor vehicle using the computer program.

12. (Original) The method as recited in claim 1, further comprising:
at least one of controlling and regulating a system in a building using the computer program.

13. (Original) The method as recited in claim 1, further comprising:
controlling or regulating at least one of an alarm system, a heating system, air conditioning system or an access control system in a building using the computer program.

14. (Currently Amended) A computer-readable storage medium storing a set of instructions for controlling a computer program having multitasking capability of a computing element of a controller for at least one of controlling and regulating a system that is able to take up various possible system states, the set of instructions capable of being executed on the computing element, comprising:

a computer code arrangement having computer code for performing the following:

subdividing the computer program into a plurality of functionally linked functionalities;

defining possible operating states for the functionalities;

defining possible system states of the system;

allocating specifiable operating states to the functionalities for each system state;

ascertaining dependencies of the functionalities on one another, a first functionality being dependent upon a second functionality if at least one input variable of the first functionality is ascertained in the second functionality; and

centrally specifying the operating states required for a certain system state, taking into consideration the ascertained dependencies among the functionalities and further boundary conditions,

wherein each of the operating states is defined by an operating state variable which is able to take up various operating state values, and

wherein each of the operating state variables is able to take up operating state values corresponding to “full functionality”, “limited functionality” and “no functionality” settings.

15. (Original) The storage medium as recited in claim 14, wherein the set of instructions is stored on one of a read-only memory, a random access memory, or on a flash memory.

16. (Currently Amended) A controller for at least one of controlling and regulating a system which is able to take up various possible system states, the controller including a computing element on which a computer program having multitasking capability is able to be run, comprising:

a subdividing arrangement for subdividing the computer program into a plurality of functionally linked functionalities;

a first defining arrangement for defining permissible operating states of the functionalities;

a second defining arrangement for defining possible system states and allocating to the operating states specifiable settings for each system states;

an ascertaining arrangement for ascertaining the functionalities depending on one another, a first functionality being dependent upon a second functionality if at least one input variable the first functionality is ascertained in the second functionality; and

a specifying arrangement for centrally specifying the operating states required for a certain system state, taking into consideration the ascertained dependencies among the functionalities and further boundary conditions,

wherein each of the operating states is defined by an operating state variable which is able to take up various operating state values, and

wherein each of the operating state variables is able to take up operating state values corresponding to “full functionality”, “limited functionality” and “no functionality” settings.

17. (Previously Presented) The controller as recited in Claim 16, further comprising:

a computing arrangement for executing the computer program.

18. (New) The method as recited in claim 1, wherein for taking into consideration the ascertained dependencies among the functionalities, the at least one input variable for the first functionality is ascertained in a way other than by processing the second functionality.

19. (New) The method as recited in claim 18, further comprising:

ascertaining the at least one input variable for the first functionality by at least one of modeling the input variable from other variables, ascertaining a substitute variable, or ascertaining the input variable with using an alternative algorithm.

20. (New) The method as recited in claim 4, wherein the operating states are specified by the functionalities which characterize a certain system state, as a function of at least one fault appearing in the system.

21. (New) The method as recited in claim 4, wherein the operating states are specified by the functionalities, which characterize a certain system state, as a function of actual operating states of the functionalities.

22. (New) The method as recited in claim 4, further comprising:

at least one of controlling and regulating a system in a vehicle using the computer program.

23. (New) The method as recited in claim 22, wherein the vehicle is a motor vehicle.
24. (New) The method as recited in claim 4, further comprising:
at least one controlling and regulating a driving dynamics system in a motor vehicle using the computer program.
25. (New) The method as recited in claim 4, further comprising:
at least one of controlling and regulating a system in a building using the computer program.
26. (New) The method as recited in claim 4, further comprising:
controlling or regulating at least one of an alarm system, a heating system, air conditioning system or an access control system in a building using the computer program.